

REMARKS

Applicants appreciate the Examiner's thorough review of the present application, and respectfully request reconsideration in light of the preceding amendments and the following remarks.

Claims 2, 4, 7, and 10-34 are pending in the application. Claim 9 has been canceled. Claims 10 and 28 have been rewritten in independent form. Independent claims 4 and 11 have been amended to better define the claimed invention. Independent claim 19 remains unchanged notwithstanding the Examiner's new art rejections. New claims 32-34 have been added to provide Applicants with the scope of protection to which they are believed entitled. No new matter has been introduced through the foregoing amendments.

The 35 U.S.C. 102(b) rejection of claims 4, 2, 11-18, and 24-28 as being anticipated by *Rutz* (U.S. Patent No. 4,844,348) is noted.

Independent claim 4 has been amended to require that the cooling of said component be performed **to an extent sufficient to reduce or prevent the adhesion and/or the drying rate and the layering of the coating liquid** on a surface of said component. Although *Rutz* teaches cooling spray head 8 by air flowing in space 54 past compressed air motor 6, connector 10 and out through annular slot 63, the cooling effect of the air flow is not disclosed or suggested to be sufficient to reduce or prevent the adhesion and/or the drying rate and the layering of the coating liquid on the spray head surface, as presently claimed. Accordingly, Applicants respectfully submit that amended independent claim 4 is not anticipated by *Rutz*. For at least the same reason, claims 2, 24 and 34 are not anticipated by *Rutz*.

In addition, claim 24 is not anticipated by *Rutz* further because the reference clearly fails to teach or suggest the claimed step of **cooling the compressed gas**, by a cooling element. The air entering space 54 of *Rutz* is not disclosed or suggested to be cooled by any cooling element. The

Examiner's allegation that *Rutz* teaches a cooling unit 6 is inaccurate, because element 6 in *Rutz* is not a cooling unit; it is a compressed air motor for rotating spray head 8. See column 3, lines 10-13 of *Rutz*. Claim 24 has further been amended to additionally require that **the cooling of the compressed gas takes place prior to blowing** the cooled, compressed gas onto the surface region of the component to be cooled. *Rutz* clearly fails to teach or suggest this feature. Claim 24 is therefore patentable over *Rutz*.

Independent claim 11 has been amended to additionally recite the step of **cooling the cooling medium prior to depositing** said cooling medium onto the external surface of said atomizer. As discussed above with respect to claim 22, *Rutz* does not fairly teach or suggest the newly claimed feature. Amended independent claim 11 is therefore patentable over *Rutz*.

Claims 12-18 and 25-27 depend from claim 11, and are considered patentable at least for the reason advanced with respect to amended claim 11. Claims 12-18 and 25-27 are also patentable on their own merits since these claims recite other features of the invention neither disclosed, taught nor suggested by the applied art.

As to claim 12, the applied reference clearly fails to teach or suggest that said cooling step comprises indirectly cooling said atomizing edge to an extent sufficient to **prevent precipitation** of the coating liquid on the external surface in the vicinity of said atomizing edge during said atomizing and spraying step. Note the above discussion of amended claim 4.

As to claim 13, the applied reference clearly fails to teach or suggest the claimed cooling step that comprises **directly** depositing the cooling medium on the rear end of said atomizer in a region rearwardly, longitudinally spaced from said atomizing edge. The *Rutz* atomizer or spray head 8 is best seen in FIG. 2. It is noted that the spray head in FIGs. 1 and 2 of *Rutz* are identical. See column 5, lines 66-68 of *Rutz*. Thus, in the embodiment shown in FIG. 1 of *Rutz*, the entire spray head 8 is located forward of annular slot 63 from which air flowing in space 54 escapes the

housing. Inside the housing, the air flowing in space 54 is prevented from directly accessing spray head 8 by numerous elements such as motor 6 and connector 10. Outside the housing, the air escaping from slot 63 is isolated from spray head 8 by shaping air 20. Thus, the “cooling” air flowing in space 54 cannot be regarded as being directly deposited on the atomizer/spray head 8, unlike the presently claimed invention.

As to claim 14, the applied reference clearly fails to teach or suggest the claimed cooling step that comprises **directly** depositing the cooling medium on the external surface of said atomizer in a region that is not accessible to by the coating liquid during said atomizing and spraying. Note, the above discussion with respect to claim 13.

As to claim 16, the applied reference clearly fails to teach or suggest that said cooling medium is **directly** deposited on said rear end portion of the atomizing element. Note, the above discussion with respect to claim 13.

As to claim 17, the applied reference clearly fails to teach or suggest the steps of **providing a cooling element; and cooling the compressed gas, by said cooling element, prior to depositing** said compressed gas onto the external surface of said atomizer.

As to claim 27, the applied reference clearly fails to teach or suggest the step of **cooling said shaping air**, with a cooling unit, prior to said shaping. In *Rutz*, shaping air 18 is not disclosed or suggested to be cooled prior to the shaping step.

The anticipatory rejection of claim 28 is traversed, because the applied reference clearly fails to teach or suggest the step of **cooling said at least one of shaping air, bearing air, turbine air and braking air** with said cooling unit prior to said supplying. *Rutz* appears to teach shaping air 18 and turbine air 22 none of which are disclosed or suggested to be cooled prior to being supplied to the spray head 8.

The 35 U.S.C. 102(b) rejection of claims 9, 7, 10, 19-22 and 29-31 as being anticipated by *Rutz* and the 35 U.S.C. 103(a) rejection of claim 23 as being obvious over *Rutz* are noted.

The anticipatory rejection of claim 10 is traversed, because the applied reference clearly fails to teach or suggest the claimed **cooling element** for cooling the compressed gas. It is acknowledged that *Rutz* teaches using some air flow in space 54 to cool the spray head 8. However, *Rutz* fails to teach or suggest that the air itself is cooled, and therefore, fails to teach or suggest the claimed cooling element.

Claim 7 depends from claim 10, and are considered patentable at least for the reason advanced with respect to claim 10.

The anticipatory rejection of claim 19 is traversed, because the applied reference clearly fails to teach or suggest the claimed cooling medium outlet **pointing at** the rear end portion of said atomizer in order to deposit a cooling medium onto the external surface of said atomizer. The Examiner appears to read conduits 24 of *Rutz* on the claimed cooling medium outlet. As can be seen in FIG. 1 of *Rutz*, the conduits 24 point away from spray head 8. It is acknowledged that *Rutz* also teaches delivering pressurized air to space 54 via a special line. See column 5, line 7 of *Rutz*. However, the reference falls short of describing or even suggesting how the outlet of such a special line should be configured. Therefore, Applicants respectfully submit that the reference fails to anticipate claim 19.

Claims 20-23 and 29-33 depend from claim 19, and are not anticipated by *Rutz* at least for the reason advanced with respect to claim 19. Claims 20-23 and 29-33 are also patentable on their own merits since these claims recite other features of the invention neither disclosed, taught nor suggested by the applied art.

For example, as to claim 21, the applied reference clearly fails to teach or suggest the claimed **cooling element** for cooling said compressed gas and delivering said cooled, compressed

gas to said blower. Note, the above discussion with respect to claim 10.

As to claim 32, the applied reference clearly fails to teach or suggest the claimed arrangement of at least one cooling medium outlet formed in the coolant line to be spaced from the rear end portion of said atomizer by a distance shorter than a length of said coolant line between the outlet of the cooling cartridge and said at least one cooling medium outlet.

As to claim 33, the applied reference clearly fails to teach or suggest that the cooling medium outlet is positioned adjacent the rear end portion of said atomizer so as to **directly** deposit the cooling medium onto the external surface of said rear end portion. Note, the above discussion with respect to claim 13.

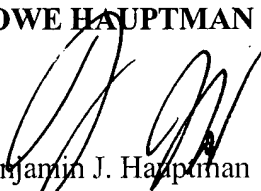
Each of the Examiner's rejections has been traversed. Accordingly, Applicants respectfully submit that all claims are now in condition for allowance. Early and favorable indication of allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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Date: November 3, 2004